Earth's Composition and Structure (Earth and Space Science Unifying Concept C)

Earth is composed of materials that move through the biogeochemical cycles. Earth's features are shaped by ongoing and dynamic processes. These processes can be constructive or destructive and occur over geologic time scales.

By the end of the grade band:		By the end of the grade band, students know and are able to do everything required in earlier grades and:		By the end of grade band, students know and are able to do everything required in earlier grades and:		By the end of grade band, students know and are able to do everything required in earlier grades and:		
Grades K - 2		**Grades 3 - 5**		**Grades 6 - 8**		**Grades 9 - 12**		
E.2.C	**Students understand that Earth materials include rocks, soils, and water.**	**E.5.C**	**Students understand that features on the Earth's surface are constantly changed by a combination of slow and rapid processes.**	**E.8.C**	**Students understand that landforms result from a combination of constructive and destructive processes.**	**E.12.C**	**Students understand evidence for processes that take place on a geologic time scale.**	
E.2.C.1	Students know Earth is composed of different kinds of materials (e.g. rocks, soils, and water) E/S	E.5.C.1	Students know fossils are evidence of past life. E/S	E.8.C.1	Students know sedimentary rocks and fossils provide evidence for changing environments and the constancy of geologic processes. E/S	E.12.C.1	Students know how successive rock strata and fossils can be used to confirm the age, history, and changing life forms of the Earth, including how this evidence is affected by the folding, breaking, and uplifting of layers. E/S	Geologic Processes
		E.5.C.2	Students know water, wind, and ice constantly change the Earth's land surface by eroding rock and soil in some places and depositing them in other areas. E/S	E.8.C.2	Students know rocks at Earth's surface weather, forming sediments that are buried, then compacted, heated and often recrystallized into new rock. E/S			
		E.5.C.3	Students know landforms may result from slow processes (e.g. erosion and deposition) and fast processes (e.g. volcanoes, earthquakes, landslides, flood, and human activity). E/S	E.8.C.3	Students know Earth is composed of a crust (both continental and oceanic); hot convecting mantle; and dense, a metallic core. E/S			
				E.8.C.4	Students know the very slow movement of large crustal plates result in geological events. E/S	E.12.C.2	Students understand the concept of plate tectonics including the evidence that supports it (structural, geophysical and paleontological evidence). E/S	Plate Tectonics
				E.8.C.5	Students know how geologic processes account for state and regional topography. E/S	E.12.C.3	Students know elements exist in fixed amounts and move through solid earth, oceans, atmosphere and living things as part of biogeochemical cycles. E/S	Earth's Composition and Resources
				E.8.C.6	Students know minerals have different propoerties and different distributions according to how they form. E/S			
E.2.C.2	Students know rocks come in many sizes and shapes, with various textures and colors. E/S	E.5.C.4	Students know rock is composed of different combinations of minerals. E/S					
				E.8.C.7	Students know the characteristics, abundances, and location of renewable and nonrenewable resources found in Nevada. E/S	E.12.C.4	Student know processes of obtaining, using, and recycling of renewable and non-renewable resources. E/S	
E.2.C.3	Students know soils have different colors or textures depending on their composition. E/S	E.5.C.5	Students know soil varies from place to place and has both biological and mineral components. E/S	E.8.C.8	Students know soils have properties, such as color, texture, and water retention, and provide nutrients for life according to how they form. E/S	E.12.C.5	Students know soil, derived from weathered rocks and decomposed organic material, is found in layers. E/S	